

# Atlantic Richfield Company

**Jack Oman**  
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March 9, 2012

## **CERTIFIED – RETURN RECEIPT REQUESTED**

Ms. Jere Johnson  
Remedial Project Manager  
U.S. Environmental Protection Agency Region 9  
75 Hawthorne Street, SFD-9-1  
San Francisco, CA 94105

**Subject: February 2012 Monthly Report, Yerington Mine Site, Lyon County, Nevada: Administrative Order for Remedial Investigation and Feasibility Study (RI/FS), CERCLA Docket No. 9-2007-0005; Administrative Order on Consent, CERCLA Docket No. 09-2009-0010**

Dear Ms. Johnson:

Pursuant to the above referenced orders issued by the U.S. Environmental Protection Agency - Region 9 (EPA), Atlantic Richfield Company (ARC) has prepared this February 2012 monthly report for Operations and Maintenance (O&M) and RI/FS activities at the Yerington Mine Site (Site).

## **February 2012 Activities**

### Site Security and O&M Activities

- Continued routine Site O&M, security and bird deterrent activities. Security cameras at various locations (e.g., Main and Arimetco gates, entrances to buildings) indicated no activity of concern.
- “Wind Dancers” were active at the Slot Pond, the Pumpback Well System (PWS) Pond, and the Lined Evaporation Pond. Operation of the propane cannons for the Arimetco Fluid Management System (FMS) ponds (with the exception of the VLT Pond, as directed by EPA). Locations of “Wind Dancers” and bird deterrent flags were rotated every two weeks, or as field observations dictated, to lessen the possibility of birds becoming habituated to these deterrents. The bird guard towers remained active due to water in the PWS Pond. Start/stop times on all cannons continued to be adjusted.
- Water levels in PWS Evaporation Pond cells: North Cell = 0.0 feet; Middle Cell = 1.5 feet; South Cell = 3.2 feet (water in the two cells primarily resulted from the aquifer test, and have remained constant since the test).
- Arimetco FMS pond levels: Phase 1 Pond = 3.65 feet; FMS Evaporation Pond = 8.31 feet; VLT Pond = 8.61 feet; Slot 2 Pond = 14.12 feet. On February 6-8, approximately 152,986 gallons were pumped from the VLT Pond to the FMS Evaporation Pond to eliminate leak detector activity and determine the location of possible leaks in the VLT Pond primary liner. After this fluid transfer, the VLT leak detector reported no fluids and fluid levels in the VLT Pond have been maintained below the elevation of the leaks. Leak detector data indicated that approximately 45,826 gallons of solution were pumped in February. Approximately 72,041 gallons of solution have been pumped from the leak detectors since January 1, 2012. The remaining freeboard in the FMS Evaporation Pond on February 29 was 1.88 feet. See attached monitoring data.
- FMS pond fluid samples for the first quarter (1Q) of 2012 were obtained February 20-21.

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## **February 2012 Activities - Continued**

### Other Site Activities

- Singatse Peak Services (SPS) continued with modifications and improvements to on-Site facilities.
- Joe Sawyer and Greg Lovato (NDEP) were on site February 16 to prepare for a site visit hosted by SPS for the governor and his staff.
- B.V. Nevada personnel continued demolition and salvage activities.
- Site O&M personnel continued to paint bollards, and installed additional stakes and reflectors along roadways, to improve Site safety conditions.
- Continued Site wildlife surveys and wildlife observation reports.

### Site Characterization Activities

- Monthly groundwater elevation measurements were obtained February 27 - March 1.
- A pit lake water elevation of 4227.493 feet amsl was recorded on February 27, 2012 from the pressure transducer, an increase of 0.483 feet January 27, 2012. The pit lake elevation has risen 3.49 feet since February 27, 2011.
- Continued meteorological monitoring at the AM-6 location including wind speed/direction, temperature, relative humidity, barometric pressure, precipitation and solar radiation.
- No residences were added to the domestic well sampling program. Receipt of signed access agreements from DW-77 (re-sent in February 2012), DW-192 (sent in December 2011) and DW-195 (sent in February 2012) are pending.
- No new residences were added to the Bottled Water Program.
- Continued data compilation for inclusion in the Annual 2011 Groundwater Monitoring Report (GMR) and the Annual 2011 Domestic Well Monitoring Report (DWMR).
- Performed the 1Q 2012 Site-wide groundwater monitoring event, including the monitoring of wells installed by the Yerington Paiute Tribe (YPT) and by EPA around Arimetco facilities.
- Continued field and laboratory investigations associated with the On-Site Monitor Well Installation Work Plan. The following wells were completed and installed: B/W-76S, B/W-76I, B/W-12RB and WRA 3-3B. The following wells were developed: PA-MW-5S1, B/W-75S, B/W-75B and B/W-26. Based on elevated turbidity readings from quarterly sampling events, the following wells were re-developed: B/W-32D5, B/W-42S, B/W-43S, B/W-61B, B/W-64D2, MW-5B, MW-H4SN, MW-H12, MW-SXN, MW-SXS and YPT-13. Zonal samples were collected at B/W-56 and B/W-57.
- Slug testing and monitor well surveying continued for new wells. Dedicated bladder pumps were installed in all of the Arimetco wells, the YPT wells, wells constructed pursuant to the Work Plan, and bedrock wells B/W-12RB, B/W-17B and B/W-26RB, which are associated with the Background Groundwater Quality Assessment (BGQA).
- Continued data management and evaluation activities associated with the Aquifer Test Work Plan including: 1) curve-matching for the evaluation of aquifer properties; and 2) detailed assessment of anomalous response data; and 3) the estimation of aquifer parameters. Initiated the Data Summary Report for the aquifer test.
- Transmitted preliminary draft responses to EPA comments on the 2010 Monitor Well and Agricultural Field Characterization Data Summary Report (2010 DSR) dated August 12, 2011. The responses were transmitted on February 24 for discussion purposes only.
- Finalized the aquifer solids SOP in response to EPA input. Provided a tour of the Hazen laboratory to EPA technical staff on February 28.
- Continued to prepare components of the revised Site-Wide Groundwater Operable Unit (OU-1) Remedial Investigation Work Plan due for submittal during the second quarter of 2012 including appendices related to calculation of soil-water partition coefficients, surface water data and hydrologic tracer data.
- Initiated the preparation of a technical memorandum that provides the thermodynamic database to be used for geochemical modeling.

## **February 2012 Activities – Continued**

### Site Characterization Activities-Continued

- Continued to prepare preliminary response to EPA comments on the BGQA.
- Initiated the preparation of a letter to EPA that proposes the elimination from future RI sampling activities of select hydrologic tracers that appear to be of limited use for RI characterization.
- Continued the compilation of results of the sub-surface identification and investigation of features in the Truck Shop, Sulfide Plant and Truck Wash/Paint Shop as part of the Process Areas (OU3) Sub-Surface Utility and Dry Well Investigation.
- Routine database management activities.

## **Planned March/April 2012 Activities**

### Site Security and O&M Activities

- Continue routine Site O&M, security and bird deterrent activities.
- Transfer fluids from the VLT Pond to the FMS Evaporation Pond to reduce or eliminate leak detector activity associated with the VLT Pond.
- Transmit to EPA a Data Summary Report pursuant to the VLT Transformer Soils Characterization and Removal Work Plan.
- Conduct a job walk on March 8 with EPA and SPS to review planned 2012 FMS improvements.

### Other Site Activities

- Complete the compilation of aerial survey-based photos and maps.
- Continue Site wildlife surveys, maintenance of wildlife observation data and preparation of wildlife observation reports.

### Site Characterization Activities

- Continue groundwater elevation and pit lake level measurements, and meteorological monitoring.
- Continue the Bottled Water Program.
- Discuss the 2010 DSR with EPA, finalize responses to comments based on the discussion, and complete revisions and transmit the revised 2010 DSR.
- Continue data compilation associated with the revised Aquifer Test Work Plan, and submit a Data Summary Report.
- Continue the compilation of data for inclusion in the 2011 Annual GMR and 2011 Annual DMR. Transmit the 2011 Annual DWMR.
- Implement the 1Q 2012 domestic well monitoring event in March.
- Continue the compilation of information for inclusion in the revised Groundwater RI Work Plan.
- Complete the following On-Site Monitor Well Program field activities: 1) the completion of drilling, logging, zonal sampling and well construction at the three background locations (B/W-56, -57 and -58) presented in the BGQA; 2) the completion of well development activities; 3) slug testing in the remaining BGQA wells (B/W-17B, 56, -57 and -58); 4) survey all monitor wells; 5) install dedicated bladder pumps and sample remaining wells as part of the 1Q 2012 sampling event.
- Receive rare earth element (REE) analyses from the analytical laboratory and initiate the interpretation of results.
- Continue the aquifer solids testing program, including the submittal of final SOPs to EPA.
- Provide preliminary responses to EPA and YPT comments on the draft BGQA, and discuss the comments with EPA and YPT.
- Briefly summarize, and submit to EPA, the results of utility investigations in select portions of the Process Areas (Sulfide Plant Truck Shop, Paint Shop). When available, review EPA's draft Process Areas (OU-3) RI Work Plan.

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Please contact me at (714) 228-6774 or via e-mail at [jack.oman@bp.com](mailto:jack.oman@bp.com) if you have any questions or comments about the February 2012 monthly report.

Sincerely,



Jack Oman  
Project Manager

Attachments

cc: Dave Seter, EPA – via electronic mail  
Roberta Blank, EPA – via electronic mail  
Andrew Helmlinger, EPA – via electronic mail  
Tom Dunkelman, EPA – via electronic mail  
Greg Lovato, NDEP – via electronic mail  
Tom Olsen, BLM – via electronic mail  
Dan Newell, City of Yerington – via electronic mail  
Phyllis Hunewill – via electronic mail  
Virgil Arellano, Lyon County Commissioner – via electronic mail  
Richard Faber, Lyon County Facilities Engineering – via electronic mail  
Tom Grady, Nevada State Assembly – via electronic mail  
Jim Sanford, MVEC – via electronic mail  
Deborah Dunn, YPT – via electronic mail  
Chairwoman Howard, YPT – via electronic mail  
Dietrick McGinnis, McGinnis and Associates – via electronic mail  
Tom Bowden, Ridolfi, Inc. – via electronic mail  
Chairwoman McFalls, WRPT – via electronic mail  
Vicky Moyle, WRPT – via electronic mail  
Ron Halsey, Atlantic Richfield Company – via electronic mail  
James Lucari, Atlantic Richfield Company – via electronic mail  
Marc Ferries, Atlantic Richfield Company – via electronic mail  
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